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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,538	04/16/2004	Sham N. Redkar	JFCT-1-04(CIP.2)	2152

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EXAMINER	
OH, TAYLOR V	
ART UNIT	**PAPER NUMBER**
1625	

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/826,538	REDKAR ET AL.	
	Examiner	Art Unit	
	Taylor Victor Oh	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/16/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The Status of Claims :

Claims 1-12 are pending.

Claims 1-12 have been rejected.

DETAILED ACTION

Priority

1. It is noted that this application is a CIP of 10/269,714 (10/11/2002) which has been abandoned, which is a CIP of 10/017,131 (US 6,677,361), filed on 12/14/2001, which has been entered in page 1 of the specification.

Drawings

2. None.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, the phrase ' the diphenhydramine salt comprises" is recited. The expression is vague and indefinite because the word "comprises ' would mean that

there are other additional components besides the only diphenhydramine salt. Therefore, an appropriate correction is required.

In claim 12, the phrase ' the base comprises" is recited. The expression is vague and indefinite because the word "comprises ' would mean that there are other additional components besides the only base. Therefore, an appropriate correction is required.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chopdekar et al (U.S. 5,663,415) in view of Gordziel (U.S. 6,287,597) and Sikora et al(U.S. 6,268,012).

Chopdekar et al discloses a process of preparing antihistamine tannates ; for example , diphenhydramine tannate can be obtained from reacting an antihistamine selected from the group consisting of diphenhydramine, phenylephrine, pyrilamine, and etc. (see col. 3 ,lines 1-4) with tannic acid at the reaction temperature of 65 to 70^0 C (see col. 4 ,lines 1-2) in the presence of water (50 wt %) (see col. 4 , example 2) for a period of time in the range of 5 minutes to 4 hours, thereby obtaining the resultant product with 2 wt % of water (see col. 4, lines 39-40) at a reduced pressure (see col. 2 ,lines 28-34) or under vacuum at a temperature of 60^0 C. (see col. 4 , lines 15-17).

Furthermore, the molar ratio of antihistamine free base to tannic acid is generally in the range of 4:1 to 6:1 in order to adjust either of the excess antihistamine free base or tannic acid (see col. 2 , lines 46-57). Furthermore, the antihistamine in the

form of its tannate salt with a purity level of at least 95 wt.% and often at least 98 wt. % (see col. 1 ,lines 65-67) can be desirable, because such salt is quite stable and may be administered without any side effects (see col. 1 ,lines 15-18).

In addition, Chopdekar et al describes that antihistamine compounds can be in the well-known form of their free bases as well as their salts, e.g. hydrochloride ,maleate, tannate (col. 1, lines 13-15); in case that the antihistamine is present as the salt, such as diphenhydramine maleate, it is possible to dissolve in cold water and it reacts with a stoichiometric amount of a base such as sodium or potassium hydroxide, thereby recovering the antihistamine free base (col. 2, lines 39-45).

The instant invention, however, differs from the prior art reference in that the recovered diphenhydramine tannate is milled to provide the free-flowing powder; its particle size is specified ; the reaction is conducted in the presence of 0 to 20 wt % water at a temperature of 75 to 150^0C; the diphenhydramine tannate is dried by sparging with nitrogen for a period of 1 to 10 hours.

Gordziel teaches a process of preparing antihistaminic/decongestant tannate compositions , such as pyrilamine tannate, and phenylephrine tannate (see col. 1 ,lines 5-9) by reacting an antihistamine free base , such as pyrilamine and phenylephrine, with tannic acid in the presence of a solvent (see col. 1 ,lines 60-63); Gordziel , also,

has offered guidance that the compositions can be used for oral administration in the form of tablets, suspensions, and powders (see col. 2 ,lines 15-18).

Furthermore, Sikora et al teaches a generic process for dehydrating pharmaceutical compounds (see col. 12, lines 53-56) by using the drying medium containing nitrogen (see col. 11 ,lines 30-32) for a period of 2.25 hours (see col. 23 ,lines 10-11).

With respect to the unspecified particle size, the limitation of a process with respect to ranges of pH, time , temperature ,and the particle size does not impart patentability to a process when such values are those which would be determined by one of ordinary skill in the art in achieving optimum operation of the process. Furthermore, selection of particle size is not a patentable modification in the absence of unobvious results. In re Rose, 105 U.S.P.Q. 237 (C.C.P.A. 1955). Particle size is well understood by those of ordinary skill in the art to be a result-effective variable, especially when attempting to consider the needs of patients in the formulation of a particular drug delivery system.

Regarding the reaction temperature difference between the prior art and the present invention, the claimed ranges (75 to 150^0C) and the prior art (65 to 70^0 C) do not overlap but are close enough that one skilled artisan would have expected them to have the similar reaction condition. Furthermore, Chopdekar et al expressly offers

guidance that the maximum temperature of the reaction mixture containing antihistamine free base , tannic acid and water depends on the particular antihistamine and its heat sensitivity (see col. 2, lines 58-60). Therefore, it would have been obvious to the skilled artisan in the art to be motivated to adjust the claimed reaction temperature for producing diphenhydramine tannate according to its heat sensitivity.

In reference to the difference of water content during the reaction process, between the prior art and the present invention, the claimed ranges (0 to 20 %) and the prior art (50 %) do not overlap ; however, according to MPEP [(2144.05 (R-1)], it says that "generally differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating that such concentration is critical" ; "it is not inventive to discover the optimum or workable ranges by routine experimentation" . In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious to the skilled artisan in the art to be motivated to optimize the water content during the reaction process by routine experimentation in order to discover the workable range for the water content in the reaction process.

Chopdekar et al does disclose the process of preparing pure antihistamine tannate compositions by reacting an antihistamine selected from the group consisting of diphenhydramine tannate, phenylephrine, pyrilamine, and etc. with tannic acid at the reaction temperature of 65 to 70^0 C in the presence of water ,thereby obtaining the

resultant product at a reduced pressure or under vacuum . In addition, the antihistamine in the form of its tannate salt can be desirable, because such salt is quite stable and may be administered without any side effects . Also, Gordziel does teach the process of preparing antihistaminic/decongestant tannate compositions , such as pyrilamine tannate, and phenylephrine tannate, which can be used for oral administration in the form of powders. In addition, Sikora et al has pointed out that it is a well-known in the art that the drying medium containing nitrogen(see col. 11 ,lines 30-32) can be used for dehydrating pharmaceutical compounds (see col. 12, lines 53-56).

Chopdekar et al and Gordziel references are commonly involved in producing an antihistamine tannate composition. Chopdekar et al does indicate that the antihistamines selected from the group consisting of diphenhydramine, phenylephrine, and pyrilamine can be in the form of tannate salt , whereas Gordziel expressly teaches that pyrilamine tannate, and phenylephrine tannate are components of antihistamine tannate compositions for oral administration in the form of powders. By comparison, there is an equivalency among diphenhydramine tannate, phenylephrine, and pyrilamine tannate with respect to oral administration in the form of powders. Also, it is quite possible to apply nitrogen gas for dehydrating any pharmaceutical compounds as shown in Sikora et al.

Therefore, if the skilled artisan had desired to prepare diphenhydramine tannate for oral administration in the dried form of powders, as an alternative to the

phenylephrine and pyrilamine tannate compositions, one skilled in the art would be motivated to incorporate the Gordziel teaching in combination with Sikora's et al drying method of using nitrogen into the Chopdekar et al process. This is because the skilled artisan in the art would expect such a combination to be successful in producing diphenhydramine tannate for oral administration as the guidance shown in the Gordziel process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Taylor Victor Oh 2/5/05